

Patent
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REMARKS

Claims 1-29, 31, 32 and 34 are pending. In the Office Action dated 4/29/2009 ("Office Action"), claims 5, 6, 28, 29, 31, 32 and 34 are rejected and Claims 19 is objected to. In view of the amendments set forth above and the comments set forth below, it is submitted all Claims are in condition for allowance.

Written Consent

The Office Action objects to the application as lacking written consent of all assignees under 37 CFR 1.172. Applicants are submitting herewith a statement under 37 CFR 3.73(b) in compliance with 37 CFR 1.172. With this submission, the requirements of 37 CFR 1.172 have been satisfied, and it is respectfully requested that this objection be withdrawn.

Statement of Error

The Examiner objected to the previously-submitted Statement of Error because the described error was not an error upon which a reissue can be based. Submitted herewith is an amended statement of error describing an error on which a reissue can be based in accordance with 37 CFR 1.175(a)(1). Therefore, it is requested that this objection be withdrawn.

Reissue Oath/Declaration

The Examiner objected to the oath/declaration filed with the application because none of the errors which were relied upon to support the reissue were errors upon which a reissue could be based. As stated above, a new statement of errors and oath/declaration are submitted herewith. The statement of errors is in compliance with the requirements of 37 CFR 1.175(a)(1), and it is therefore requested that this objection be withdrawn.

Drawings

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The Examiner objected to the drawings as failing to comply with 37 CFR 1.84(p)(5) because they do not include element 414. The reference to element 414 is a typographical error and has been changed in the amendment set forth above to reference element 27, which designates the EEPROM of FIG. 1. With this change, the drawing are in accordance with 37 CFR 1.84(p)(5), and it is requested that this objection to the drawings be withdrawn.

The Examiner further rejected to the drawing because Claims 28, 29 and 31 recite mode selection means in one of the transmitting unit or the receiving unit. It is asserted that such means are not located in the receiving unit, and therefore the drawings do not show every feature of the invention of the claims. Applicants do not agree with this assessment. In regards to mode selection means within the receiving unit 14, Applicants' Specification clearly recites:

"[t]he implanted receiver 14 of FIG. 1 can be programmed by the physician or patient to obtain it's operating power from one of three sources: 1) RF coupled energy only; 2) back-up rechargeable power supply/source 44 only; or 3) a combination of both whereby the implanted receiver 14 alternates automatically from one to the other according to a preset schedule programmed via the transmitter 12." (U.S. Patent No. 5,733,313, hereinafter the '313 patent, column 8 lines 1-5, emphasis added.)

Applicants' Specification further describes that based on the manner in which the microcontroller 46 within the receiver is programmed, a corresponding mode is selected by circuitry within the receiver 14 as follows:

"When 'RF only' is selected...an output port 45 of a microcontroller 46 in the receiver 14 is switched to a "0" and a port 47 is switched to a "1" which places pmos transistor P2 in a conducting state and pmos transistor P1 in a non-conducting state. This effectively connects a line conductor 50 to a line conductor 52, making VDD equal to the output of a voltage regulator 54 which is at +3.0 vdc. When 'battery only' is selected...the output port 47 is switched to a "0" and the port 45 is switched to a "1", thus effectively connecting line conductor 56 to line conductor 52 and making VDD equal to the voltage level at the rechargeable power source 44....when 'combination' is selected...the system 10 will automatically switch the source of VDD to the output of the voltage regulator 54 (line conductor 50) when the

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transmitter 12 is proximal to the receiver 14..." ('313 patent column 8 lines 8-30.)

Moreover, when the receiver 14 is programmed in a mode that receives RF power from the transmitter, the power can be used to simultaneously operate the implanted device and recharge the rechargeable power source, as required by mode selection means element a.) of Claims 28, 29 and 31. (See, for example, '313 patent column 9 lines 25-26.)

The foregoing passages clearly disclose that the receiver 14 has both a programmable microcontroller 46 and various elements shown in at least FIGs. 3-6 that include ports 47 and 48 and transistors that can be controlled to select any mode of operation of the receiver recited by Claim 28. Such circuits clearly perform the function recited by the language of Claim 28, 29 and 31 of "mode selection means ...for controlling the supply of power in one of several modes of operation...."

While Applicants do not agree with the Examiner's assertion, in the spirit of cooperation, and to further prosecution, Applicants' have removed the reference to mode selection means being in the receiving unit from Claims 28, 29 and 31. With this amendment to the Claims, this objection is rendered moot, and the objection to the Drawings should be withdrawn.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. In particular, it is said that the reference in claim 19 to the transmitting unit not being dependent upon an A.C. power source must be supported.

Claim 19 was included with the originally-filed claim set filed on August 1, 1996 in application serial number 690,968, which eventually issued as patent number 5,733,313. As originally-filed, this claim recited "[t]he system of claim 1 wherein said transmitting unit has a self contained power supply, such as a

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battery, whereby said transmitting unit is portable and not dependant upon an a.c. power source." The claims are part of the originally-filed specification (see MPEP 608.01(I), and as such, Applicants are entitled to include this subject matter in the body of the specification. The drawings as originally filed clearly show the elements recited by original Claim 19, including battery 62 of transmitting unit 12 (see, for example, FIG.1 and column 9 lines 30-38 of the '313 patent.) This subject matter from original Claim 19 is added to the body of the specification in the amendment submitted above. With this amendment to the specification, the specification and drawings provide antecedent basis for current claim 19, and this rejection should be withdrawn.

Claim Objections

Claim 19 was objected to because the word "dependant" is misspelled, and should instead be "dependent". This Claim has been amended to correct this misspelling in the amendment set forth above, and it is requested that this objection be withdrawn.

Claim Rejections under 35 USC §112

Claims 5 and 6 were rejected under 35 USC §112 second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention because these claims include parenthetically subject matter. In the amendment submitted above, the parenthesis have been deleted, and it is therefore requested that this rejection be withdrawn.

Further, Claims 28, 29, 31, 32 and 34 were rejected under 35 USC §112 as failing to comply with the written description requirement. It is said that the specification does not refer to mode selection means as being provided by the receiver. As discussed above in regards to the objection of the drawings, the discussion of which is incorporated here in its entirety, the specification does

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clearly describe, and the drawings do show, means for selecting the mode of operation within the receiver. In fact, if such means were not present in the receiver, the receiver could not be configured in any one of several selectable modes. However, in the spirit of cooperation, and to further prosecution, the reference to the mode selection means being located in the receiving unit has been removed from Claims 28, 29, 31, 32, and 34.

The Examiner further rejected Claims 28, 29, and 31 under 35 USC § 112 first paragraph as failing to comply with the written description requirement. In particular, the Examiner maintains that the four types of operation currently recited by these claims are not supported by the original disclosure. The Examiner asserts that the independent selection of options c.) and d.) is not supported, and these modes are only selected as a combination. Applicants respectfully traverse this rejection.

With respect to Claim 28, selection c.) involves a mode to operate the implanted medical device from the transmitted RF energy, and selection d) recites operating the implanted device from both the rechargeable power supply and the transmitted RF energy. This is supported by Applicants' original specification which states:

"The implanted receiver 14 of FIG. 1 can be programmed by the physician or patient to obtain it's operating power from one of three sources: 1) RF coupled energy only; 2) back-up rechargeable power supply/source 44 only; or 3) a combination of both whereby the implanted receiver 14 alternates automatically from one to the other according to a preset schedule programmed via the transmitter 12." ('313 patent column 8 lines 1-7).

The first item listed in this passage makes very clear that the implanted device may be power by RF coupled energy only in accordance with selection c.) of claim 28, 29 or 31. Moreover, the third listed possibility of this passage supports selection d.) of Claim 28, 29 and 31.

For completeness sake, it is noted that the second item of the above-quoted passage related to receiving power from the rechargeable power source

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and provides support for selection b.) of claim 28. . Finally, support for selection a.) of Claim 28, which relates to simultaneously operating the device and recharging the rechargeable power supply from the transmitted RF energy may be found at column 9 of the '313 patent as follows:

"Referring to FIG. 1, when the receiver 14 is programmed to 'RF only', the power acquisition mode, it's exclusive source of operating power is the low level RF energy generated by transmitter 12....The actual level of RF energy generated by the inductor 64 is regulated to the minimum level required to operate the receiver 14 and the rechargeable power source 44 is trickle charged, as a real-time response to data transmitted by the receiver 14 via the microcontroller 26." ('313 patent column 9 lines 19-23, emphasis added.)

Thus, the specification as originally filed clearly provides support for each of selections a.)-d.) as recited by Claim 28. Claim 28 therefore meets the requirements of 35 USC §112 and this rejection should be withdrawn. For similar reasons, Claims 29 and 31 likewise meet the requirements of 35 USC §112, and this rejection should be withdrawn. Claims 32 and 34 depend from Claim 29 and meet the requirements of USC §112 for the reasons discussed with respect to Claim 29. Therefore, it is requested that this rejection of Claims 28, 29, 31, 32, and 34 be withdrawn.

Finally, Claim 29 is rejected under 35 USC §112 first paragraph as being based on disclosure which is not enabling. The Examiner asserts that the control means of the transmitting unit is critical or essential to the practice of the invention but is not included in the claims. In particular, the Examiner maintains that "[s]ince the mode selection means of claim 29 requires operation in multiple modes, at least some of the modes require a control means in the transmitting unit for controlling the amount of RF energy transmitted to the receiving unit. The control means in the transmitting unit is thus critical." (See the Office Action dated 6/29/09, page 7 first paragraph.) This rejection is respectfully transversed.

Applicants' Specification discloses one example embodiment wherein the transmitter may control the level of RF energy generated by inductor 64 as a

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function of proximity between inductor 64 of the transmitter and inductor 60 of the receiver. ('313 patent, column 8 lines 51-53 and column 9 lines 35-36.) Applicants' Specification states that this embodiment is desirable because it **"extends the life of the battery 62** within the transmitter 12, by adjusting the RF energy required to operate the receiver 14..." (See column 8 lines 50-51 and column 9 lines 31-33, emphasis added.) From this statement, it is clear that if this control of RF energy is not employed at the transmitter, the battery in the transmitter 12 may have a shorter life, requiring replacement earlier in the life of the device. Because of this, elimination of this RF control feature may be an inconvenience for the patient, who may have to change the transmit battery sooner than he or she otherwise would with the RF control feature. However, elimination of this feature certainly does not render the mode selection means of Claim 29 inoperable.

Further in regards to the aspect of RF energy control, Applicants' Specification states that at other times, the transmitter will generate a higher level of energy. In particular, if back-up power is selected, the transmitter will generate higher level RF energy so that the back-up power source may be recharged quickly. (See '313 patent column 6 lines 6-7.) This increase in RF energy is therefore advantageous because it will decrease the amount of time required to charge the battery of the implanted device. However, eliminating this capability does not render the invention of Claim 29 inoperable. The mode selection means of claim 29 may be used without this RF energy control feature, even though the patient may be inconvenienced by the longer recharge time.

The Examiner states that "the original disclosure does not make it clear and does not disclose how the device can operate in all modes without a transmitting unit control means". (Office Action page 7.) This statement is not understood for at least the reasons set forth above. While Applicants' Specification does disclose advantages to use of embodiments that include control means for controlling RF energy, nothing in the Specification states or in any way implies that lack of these

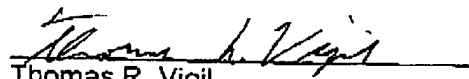
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advantages would render the mode selection means of Claim 29 inoperable, or would in any way affect or preclude use of such mode selection means. Most certainly, the advantages of any control means are not critical to operation of the mode selection means as recited by Claim 29. The mode selection means will operate with or without the inclusion of the advantages associated with RF energy control.

For at least the foregoing reasons, it is respectfully submitted that this rejection is in error and should be withdrawn. If this rejection is maintained, Applicants respectfully request that the Examiner provide a specific reference to Applicants' Specification in support of the assertion that controlling of the RF energy is critical to operation or use of mode selection means as recited by Claim 29, and that the invention of Claim 29 cannot operate in all modes without a transmitting unit control means.

In view of the foregoing, an earnest endeavor has been made to place this application in condition for allowance and an early and favorable action to that end is requested.

Respectfully submitted,


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